

(1754)

July 26, 1996

Richard Spiese
 Waste Management Division/Sites Management Section
 103 South Main Street
 Waterbury, VT 05671-0404

Jul 29 10 20 AM '96



STONE ENVIRONMENTAL INC

Main Office:

58 East State Street
 Montpelier, Vermont
 05602 USA

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RE: Former Former National Life of Vermont Annex, Montpelier, Vermont
 VT DEC Site #951754 SEI #94544

Dear Mr. Spiese:

SEI conducted a subsurface investigation in November 1994 at the former National Life of Vermont Annex in Montpelier (Figure 1) to determine if past operations at the property could have contaminated the subsurface. Laboratory analysis revealed that both trichloroethylene (TCE) and cis-1,2-dichloroethylene (1,2-DCE) were present at levels below the State of Vermont Groundwater Enforcement Standards (GWES). In light of this, the Vermont Agency of Natural Resources, Waste Management Division (WMD) required that monitoring wells MW-4, MW-5, and MW-6 (see Figure 2 for locations) be sampled again and analyzed using EPA Method 8260. In November 1995 SEI again sampled these wells. Only tetrachloroethylene (PCE) was detected during this event at 5.3 ppb in MW-4, which was above the GWES of 0.7 parts per billion (ppb). PCE was not detected in any other well. Contamination was also detected in MW-6, however, after discussing the results with Green Mountain Laboratories it was decided that these detections were probably due to laboratory or sampling error, and another sample was collected on November 16, 1996. No compounds were detected in the 8260 analysis. As PCE was detected in MW-4, SEI recommended one more round of sampling in the spring of 1996 to identify any trends that may be present in the groundwater at the site.

On May 2, 1996 SEI collected groundwater samples from the three monitoring wells and delivered them to Green Mountain Laboratories in Middlesex, Vermont for analyses using EPA Method 8260. There were no detections for any of the parameters analyzed. A comparison of the three sampling events described above are given in Table 1; the May 1996 laboratory analyses are included as Attachment 1.

These results indicate that chlorinated hydrocarbon contamination in the groundwater has declined to below the laboratory's method detection limits in the three sampled wells. Additionally, the contamination previously reported was limited in extent, and the receptor survey outlined in SEI's November 22, 1995 report did not uncover any sensitive receptors. Therefore, the Former National Life Annex is an excellent candidate for sites management activities completed (SMAC) status, and no further investigation or groundwater sampling is warranted. We recommend that the site be granted SMAC status and all monitoring wells be removed following SEI standard operating procedures.

Southeast Regional Office:

206 Langston Mill Court Phone / 919. 387.4704
 Raleigh, North Carolina Fax / 919. 387.4704
 27606 USA

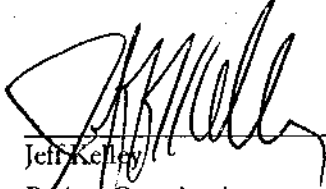
Pacific Office:

15 Frame Street NEV Phone / 64.3.473.9456
 Dunedin Fax / 64.3.473.9456
 New Zealand

If this correspondence should generate any questions, please do not hesitate to contact us anytime.

Sincerely yours,

Stone Environmental, Inc.



Jeff Kelley
Project Geoscientist

cc: Mr. Donn Blodgett, National Life of Vermont


Reviewed By: 
G:\PROJ\94-544\SMAC.LTR

Table 1
Groundwater Sampling Results

Location	Date Sampled								
	11/30/94			11/09/95			05/02/96		
	TCE (ppb)	cis-1,2- DCE (ppb)	PCE (ppb)	TCE (ppb)	cis-1,2- DCE (ppb)	PCE (ppb)	TCE (ppb)	cis-1,2- DCE (ppb)	PCE (ppb)
MW-4	3	11	ND	ND	ND	5.3	ND	ND	ND
MW-5	1	4	ND	ND	ND	ND	ND	ND	ND
MW-6	3	13	ND	ND	ND	ND	ND	ND	ND
Enforcement Standard	5 (GWES)	70 (MCL)	0.7 (GWES)	5 (GWES)	70 (MCL)	0.7 (GWES)	5 (GWES)	70 (MCL)	0.7 (GWES)

GWES = Vermont Ground Water Enforcement Standard

MCL = Maximum Contaminant Level (Federal)

TCE = Trichloroethylene

cis-1,2-DCE = Cis-1,2-Dichloroethylene

PCE = Tetrachloroethylene

nd = non-detect

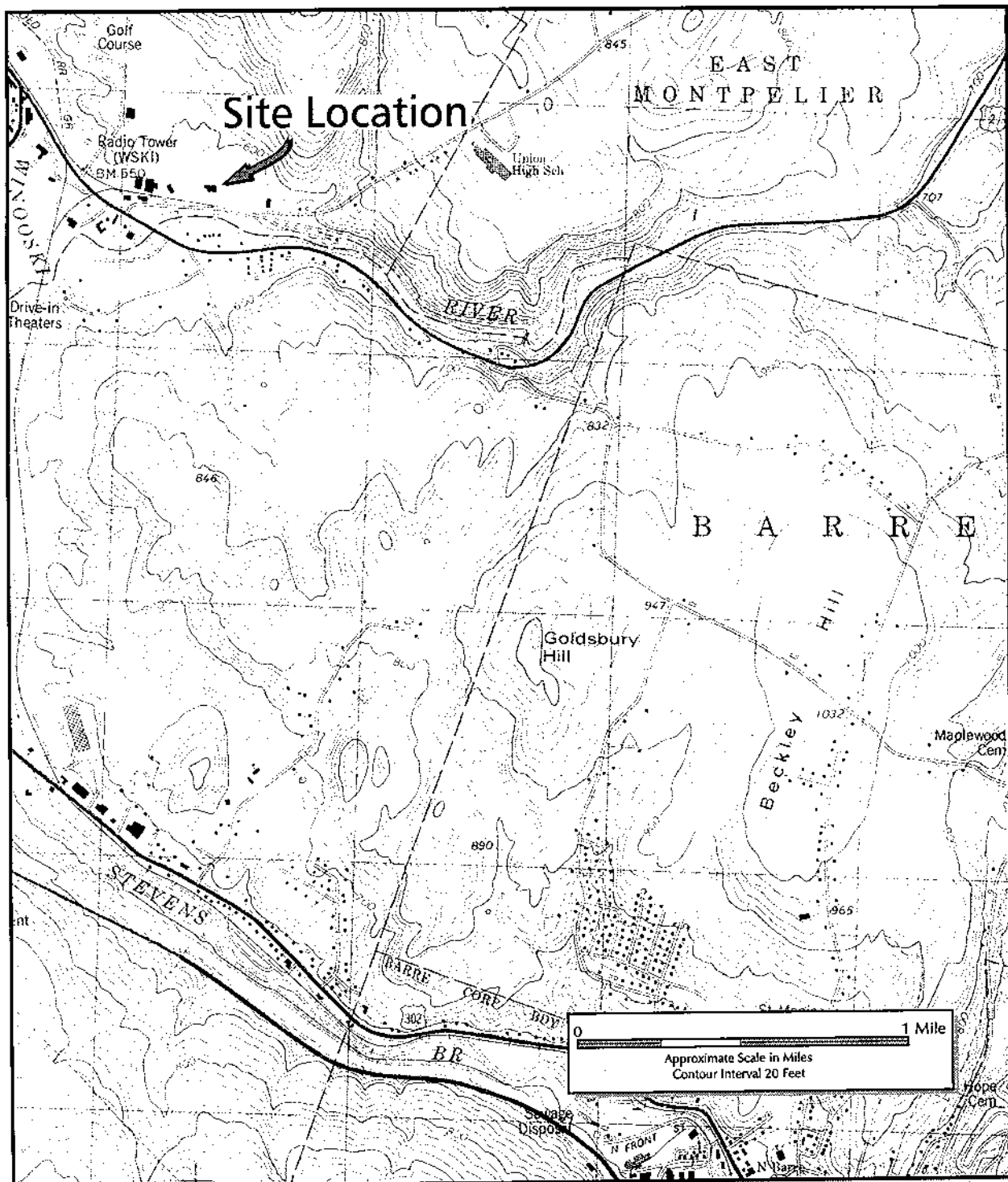


FIGURE 1: LOCATION MAP
Former National Life of Vermont Annex
Montpelier, Vermont



Source: Barre West, Vermont Quadrangle, 7.5 Minute Series,
1:24,000 Scale, USGS, 1978, Photorevised 1988
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int:12-21-94 jms; rev:1 7-23-95 jms



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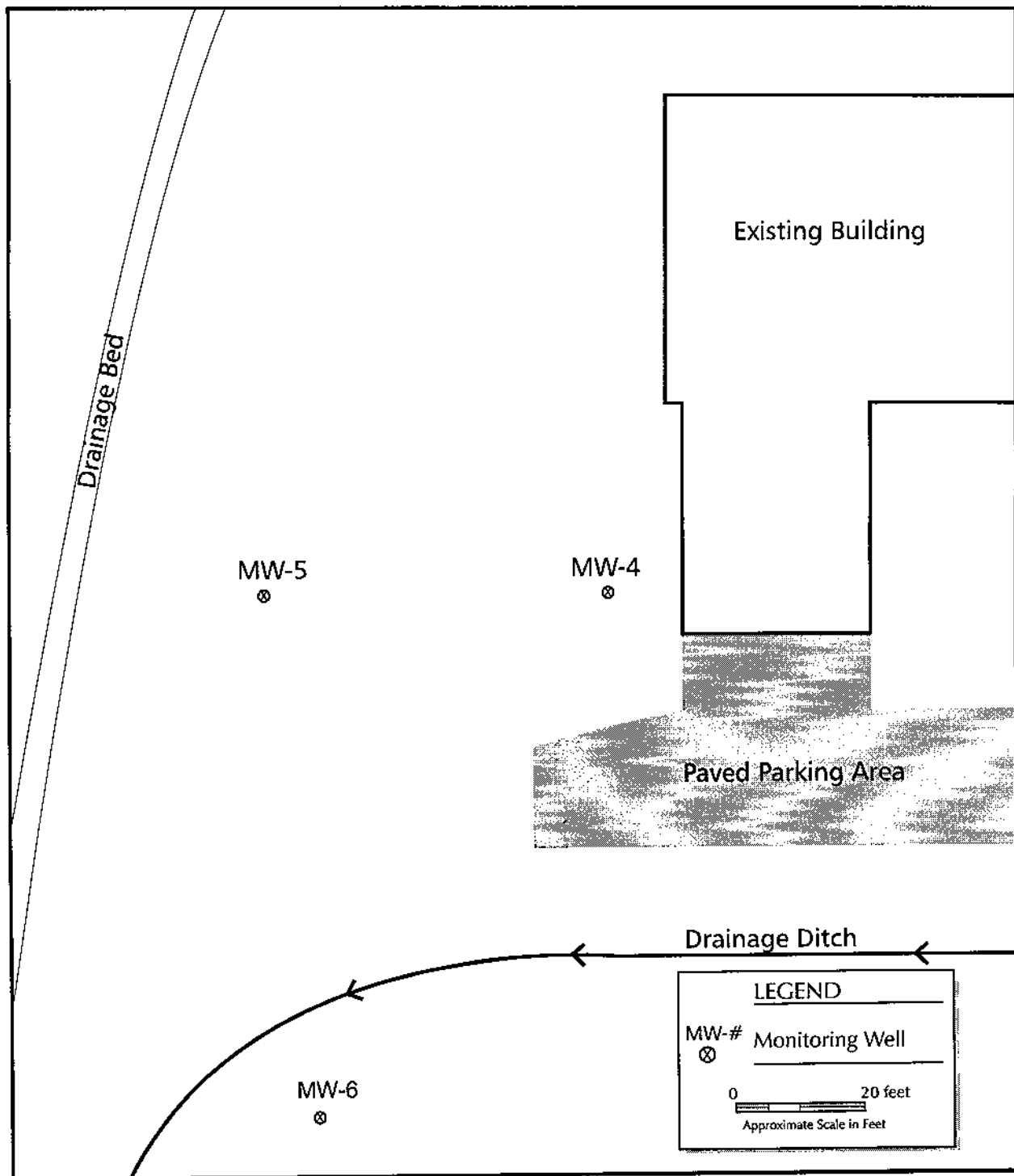


FIGURE 2: SITE MAP
Former National Life of Vermont Annex
Montpelier, Vermont



Source: Modification of Adams Engineering survey 12-94; SEI field notes 12-94
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int:12-21-94 jms; rev:1 7-23-96 jms



STONE ENVIRONMENTAL INC

MAY 09 1996

GREEN MOUNTAIN LABORATORIES, INC.

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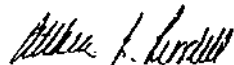
LABORATORY RESULTS

CLIENT NAME:	Stone Environmental, Inc.	REFERENCE NO.:	0746
ADDRESS:	58 E. State Street	PROJECT NO.:	94-544
	Montpelier, VT 05602	DATE OF SAMPLE:	05/02/96
SAMPLE LOCATION:	BTG	DATE OF RECEIPT:	05/02/96
SAMPLER:	Kevin Brooker	DATE OF ANALYSIS:	05/06/96
ATTENTION:	Jeff Kelley	DATE OF REPORT:	05/07/96

Pertaining to the analyses of specimens submitted under the accompanying chain of custody form, please note the following:

- Water samples submitted for VOC analysis were preserved with HCl.
- Specimens were processed and examined according to the procedures outlined in the specified method.
- Holding times were honored.
- Instruments were appropriately tuned and calibrations were checked with the frequencies required in the specified method.
- Blank contamination was not observed at levels interfering with the analytical results.
- Continuing Calibration standards were monitored at intervals indicated in the specified method. The resulting analytical precision and accuracy were determined to be within method QA/QC acceptance limits.
- The efficiency of analyte recovery for individual samples was monitored by the addition of surrogate analyte to all samples, standards, and blanks. Surrogate recoveries were found to be within laboratory QA/QC acceptance limits, unless noted otherwise.

Reviewed by:



Althea L. Lindell
Director, Chemical Services

Green Mountain Laboratories, Inc.

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GML REF. #: 0746
STATION: MW-4
ANALYSIS DATE: 05/06/96
DATE SAMPLED: 05/02/96
SAMPLE TYPE: WATER

PARAMETERS	PQL	µg/L	PARAMETERS	PQL	µg/L
Benzene	1	ND	Ethylbenzene	1	ND
Bromobenzene	1	ND	Hexachlorobutadiene	10	ND
Bromochloromethane	1	ND	Isopropylbenzene	1	ND
Bromodichloromethane	1	ND	p-Isopropyltoluene	1	ND
Bromoform	1	ND	Methylene Chloride	5	ND
Bromomethane	2	ND	Methyl-t-butyl-ether (MTBE)	1	ND
n-Butylbenzene	1	ND	Naphthalene	5	ND
sec-Butylbenzene	1	ND	n-Propylbenzene	1	ND
tert-Butylbenzene	1	ND	Styrene	1	ND
Carbon Tetrachloride	1	ND	1,1,1,2-Tetrachloroethane	1	ND
Chlorobenzene	1	ND	1,1,2,2-Tetrachloroethane	1	ND
Chloroethane	2	ND	Tetrachloroethylene	1	ND
Chloroform	2	ND	Toluene	1	ND
Chloromethane	2	ND	1,2,3-Trichlorobenzene	1	ND
o-Chlorotoluene	1	ND	1,2,4-Trichlorobenzene	1	ND
p-Chlorotoluene	1	ND	1,1,1-Trichloroethane	1	ND
1,2-Dibromo-3-chloropropan	1	ND	1,1,2-Trichloroethane	1	ND
Dibromochloromethane	1	ND	Trichloroethylene (TCE)	1	ND
1,2-Dibromomethane (EDB)	1	ND	Trichlorofluoromethane	2	ND
Dibromomethane	1	ND	1,2,3-Trichloropropane	1	ND
o-Dichlorobenzene	1	ND	1,2,4-Trimethylbenzene	1	ND
m-Dichlorobenzene	1	ND	1,3,5-Trimethylbenzene	1	ND
p-Dichlorobenzene	1	ND	Vinyl Chloride	2	ND
Dichlorodifluoromethane	2	ND	o-Xylene	1	ND
1,1-Dichloroethane	1	ND	m + p-Xylene	2	ND
1,2-Dichloroethane	1	ND	Surrogates:		
1,1-Dichloroethylene	1	ND	Dibromofluoromethane	106 %	
cis-1,2-Dichloroethylene	1	ND	Toluene-D8	96.9 %	
trans-1,2-Dichloroethylene	1	ND	4-Bromofluorobenzene	91.3 %	
1,2-Dichloropropane	1	ND			
1,3-Dichloropropane	1	ND			
2,2-Dichloropropane	1	ND			
1,1-Dichloropropene	1	ND			

ND - Not Detected

Concentration units = µg/L

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GML REF. #: 0746
STATION: MW-5
ANALYSIS DATE: 05/06/96
DATE SAMPLED: 05/02/96
SAMPLE TYPE: WATER

PARAMETERS	PQL	µg/L	PARAMETERS	PQL	µg/L
Benzene	1	ND	Ethylbenzene	1	ND
Bromobenzene	1	ND	Hexachlorobutadiene	10	ND
Bromochloromethane	1	ND	Isopropylbenzene	1	ND
Bromodichloromethane	1	ND	p-Isopropyltoluene	1	ND
Bromoform	1	ND	Methylene Chloride	5	ND
Bromomethane	2	ND	Methyl-t-butyl-ether (MTBE)	1	ND
n-Butylbenzene	1	ND	Naphthalene	5	ND
sec-Butylbenzene	1	ND	n-Propylbenzene	1	ND
tert-Butylbenzene	1	ND	Styrene	1	ND
Carbon Tetrachloride	1	ND	1,1,1,2-Tetrachloroethane	1	ND
Chlorobenzene	1	ND	1,1,2,2-Tetrachloroethane	1	ND
Chloroethane	2	ND	Tetrachloroethylene	1	ND
Chloroform	2	ND	Toluene	1	ND
Chloromethane	2	ND	1,2,3-Trichlorobenzene	1	ND
o-Chlorotoluene	1	ND	1,2,4-Trichlorobenzene	1	ND
p-Chlorotoluene	1	ND	1,1,1-Trichloroethane	1	ND
1,2-Dibromo-3-chloropropan	1	ND	1,1,2-Trichloroethane	1	ND
Dibromochloromethane	1	ND	Trichloroethylene (TCE)	1	ND
1,2-Dibromomethane (EDB)	1	ND	Trichlorofluoromethane	2	ND
Dibromomethane	1	ND	1,2,3-Trichloropropane	1	ND
o-Dichlorobenzene	1	ND	1,2,4-Trimethylbenzene	1	ND
m-Dichlorobenzene	1	ND	1,3,5-Trimethylbenzene	1	ND
p-Dichlorobenzene	1	ND	Vinyl Chloride	2	ND
Dichlorodifluoromethane	2	ND	o-Xylene	1	ND
1,1-Dichloroethane	1	ND	m + p-Xylene	2	ND
1,2-Dichloroethane	1	ND			
1,1-Dichloroethylene	1	ND	Surrogates:		
cis-1,2-Dichloroethylene	1	ND	Dibromofluoromethane	104 %	
trans-1,2-Dichloroethylene	1	ND	Toluene-D8	96.2 %	
1,2-Dichloropropane	1	ND	4-Bromofluorobenzene	93.6 %	
1,3-Dichloropropane	1	ND			
2,2-Dichloropropane	1	ND			
1,1-Dichloropropene	1	ND			

ND - Not Detected
Concentration units = µg/L

Green Mountain Laboratories, Inc.

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GML REF. #: 0746
STATION: MW-6
ANALYSIS DATE: 05/06/96
DATE SAMPLED: 05/02/96
SAMPLE TYPE: WATER

PARAMETERS	PQL	µg/L	PARAMETERS	PQL	µg/L
Benzene	1	ND	Ethylbenzene	1	ND
Bromobenzene	1	ND	Hexachlorobutadiene	10	ND
Bromochloromethane	1	ND	Isopropylbenzene	1	ND
Bromodichloromethane	1	ND	p-Isopropyltoluene	1	ND
Bromoform	1	ND	Methylene Chloride	5	ND
Bromomethane	2	ND	Methyl-t-butyl-ether (MTBE)	1	ND
n-Butylbenzene	1	ND	Naphthalene	5	ND
sec-Butylbenzene	1	ND	n-Propylbenzene	1	ND
tert-Butylbenzene	1	ND	Styrene	1	ND
Carbon Tetrachloride	1	ND	1,1,1,2-Tetrachloroethane	1	ND
Chlorobenzene	1	ND	1,1,2,2-Tetrachloroethane	1	ND
Chloroethane	2	ND	Tetrachloroethylene	1	ND
Chloroform	2	ND	Toluene	1	ND
Chloromethane	2	ND	1,2,3-Trichlorobenzene	1	ND
o-Chlorotoluene	1	ND	1,2,4-Trichlorobenzene	1	ND
p-Chlorotoluene	1	ND	1,1,1-Trichloroethane	1	ND
1,2-Dibromo-3-chloropropan	1	ND	1,1,2-Trichloroethane	1	ND
Dibromochloromethane	1	ND	Trichloroethylene (TCE)	1	ND
1,2-Dibromomethane (EDB)	1	ND	Trichlorofluoromethane	2	ND
Dibromomethane	1	ND	1,2,3-Trichloropropane	1	ND
o-Dichlorobenzene	1	ND	1,2,4-Trimethylbenzene	1	ND
m-Dichlorobenzene	1	ND	1,3,5-Trimethylbenzene	1	ND
p-Dichlorobenzene	1	ND	Vinyl Chloride	2	ND
Dichlorodifluoromethane	2	ND	o-Xylene	1	ND
1,1-Dichloroethane	1	ND	m + p-Xylene	2	ND
1,2-Dichloroethane	1	ND			
1,1-Dichloroethylene	1	ND	Surrogates:		
cis-1,2-Dichloroethylene	1	ND	Dibromofluoromethane	104 %	
trans-1,2-Dichloroethylene	1	ND	Toluene-D8	95.9 %	
1,2-Dichloropropane	1	ND	4-Bromofluorobenzene	93.3 %	
1,3-Dichloropropane	1	ND			
2,2-Dichloropropane	1	ND	ND - Not Detected		
1,1-Dichloropropene	1	ND	Concentration units = µg/L		

Green Mountain Laboratories, Inc.

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ANALYSIS REQUESTED

Page
1 of 1
GML #

746

CLIENT NAME SEI

ADDRESS

PROJECT NAME B7G

PROJECT NUMBER 94-544

PROJECT MANAGER Kelley

SAMPLER K. Crocker

Sample Location	Date	Time	# of cont.	Pres.	Sample Type	REMARKS:									
<u>Mw-4</u>	<u>5/2/96</u>		<u>2</u>	<u>HCP</u>	<u>WATER</u>										
<u>Mw-5</u>	<u>1</u>		<u>1</u>	<u>1</u>	<u>1</u>										
<u>Mw-6</u>	<u>1</u>		<u>1</u>	<u>1</u>	<u>1</u>										

CHAIN OF CUSTODY RECORD

1) Relinquished by: <u>[Signature]</u>	Received by: <u>[Signature]</u>	Date/Time <u>5/2/96 15:56</u>
2) Relinquished by:	Received by:	Date/Time
3) Relinquished by:	Received by:	Date/Time